HIGH-SPEED VESSEL EXPERIMENTATION

High-speed, shallow-draft vessels provide an emerging capability that has the potential to greatly enhance sea-based operations. High-speed vessels (HSVs), or high-speed network connectors, enable the faster, more responsive deployments of force modules to perform a wide range of missions. In particular, HSVs have the potential to fill the requirement for a high-speed connector to link the various nodes of the sea base. Capitalizing on their high-speed (in excess of 40 knots), shallow draft (under 15 feet) and extreme maneuverability, HSVs offer new opportunities to the joint force commander.

In sea-based operations, HSVs will provide a complementary capability that enhances the operational reach and tactical flexibility of other naval platforms, including MPF (F), and amphibious shipping. HSVs will allow the offload of deep-draft ships at sea and deliver personnel and equipment to austere, minor, and degraded ports. HSVs enable the selective offload and rapid tailoring of forces at sea necessary to meet the challenges of the future anti-access environment. The HSV will provide the high-speed connector capability to link the nodes of the Sea Base to each other, to their en route staging bases, and to the MAGTF and joint force operating ashore. HSVs allow the MAGTF commander to rapidly deliver sustainment and maneuver forces over operational distances in littoral operations, and they will play a vital role in the recovery, reconstitution, and re-employment of sea-based forces.

While the focus of experimentation conducted to date has been on supporting sea-based operations and in developing the high-speed connector capability, HSVs have also demonstrated military utility across a spectrum of operations. HSVs may support advance force/reconnaissance, surveillance, targeting, and acquisition insertions and sustained riverine operations, as well as providing a command-and-control platform.

Although the high-speed of these vessels is often highlighted, it is the combination of speed, shallow draft, maneuverability, and interoperability with amphibious and maritime prepositioning ships that

makes them a transformational technology. Key traits of these vessels include:

HIGH SPEED

Current vessels can routinely reach 40 knots while fully loaded. In addition to its high transit speed, HSVs also provide velocity to operations through rapid - onload and offload of equipment, unaided ingress and egress to ports and offload sites, and reconfiguration of the mission deck to perform a variety of missions. This speed increases the operational reach of the joint force commander, allowing him to rapidly reposition forces or deliver sustainment over wide areas of the littoral region. The vessel's high speed also makes it a platform well suited for anti-access and advance force operations.

SHALLOW DRAFT AND MANEUVERABILITY.

The HSV's shallow draft allows for much greater access to the littorals. The maneuverability of these craft allow them to transit restricted and confined channels, and access austere ports, thereby enabling the distribution of personnel, supplies and equipment throughout a much greater range of the littorals. Additionally, the maneuverability provided by the water jet propulsion allows HSVs to operate independent of pilots, tugs, pusher boats, and other port/harbor control craft. The shallow draft also makes these vessels well suited for supporting riverine operations.

C4I SUITE

A state-of-the-art C4I suite allows embarked units to conduct en route mission planning. Combining this capability to continuously plan during movement to the objective area with the ability of the HSV to access a wide range of offload points allows for a tremendous increase in flexibility and operational reach for the joint force commander.

HSVs promise to become a valuable element of the joint sea base. The combination of the HSV with MV-22s, EFVs, LCACs, and LCU(R), provide the MAGTF Commander the means to rapidly maneuver and sustain forces throughout the littorals. The HSVs shallow draft, high speed, maneuverability, and open architecture have the potential to support operations ranging from humanitarian assistance through sustained combat operations.

The Marine Corps has gained deep understanding of the HSV through Military Sealift Comand charter of *MV Westpac Express* for III Marine Expeditionary Force in Okinawa, Japan. This experience, as well as the employment of HSVs in Operation Iraqi Freedom and in major exercises such as Battle Griffin, Millenium Challenge, Victory Strike, and the West Africa Training Cruise, has demonstrated the military utility and tremendous potential of HSVs in a wide range of military operations.